

Trend Study 16C-31-99

Study site name: Box Canyon Knolls.

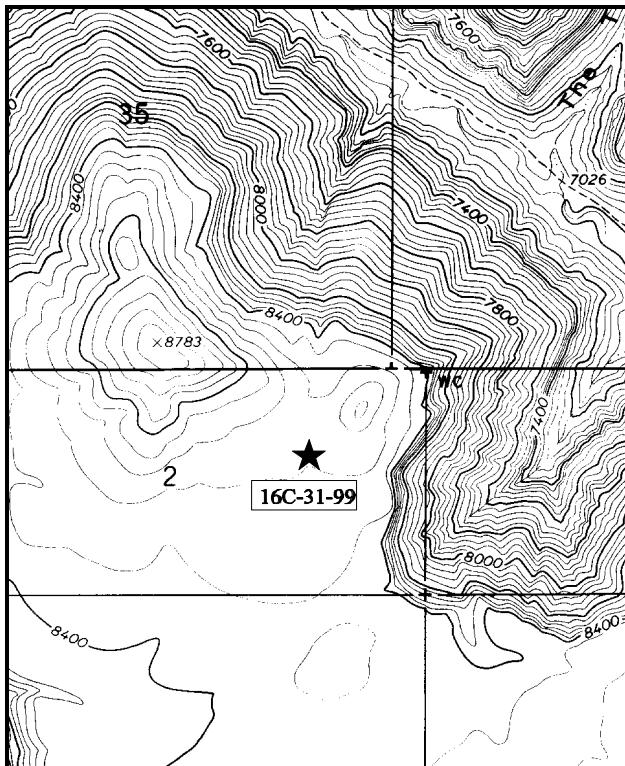
Range type: Black Sagebrush.

Compass bearing: frequency baseline 180°M.

Footmark (first frame placement) 5 feet, footmarks line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

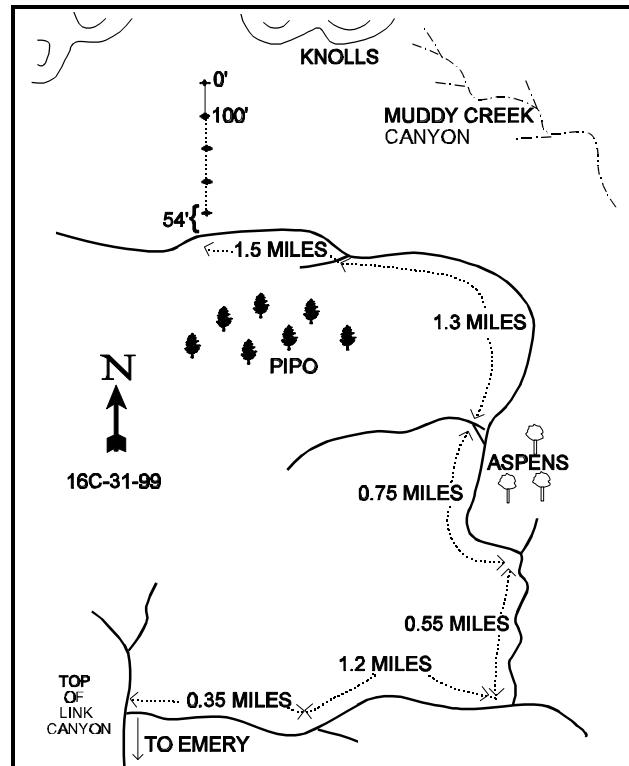
LOCATION DESCRIPTION

From Center Street in the town of Emery, continue south on Highway 10 for 1.2 miles. Turn right onto a dirt road and go 0.6 miles. Turn left and travel up Link Canyon 7 miles (4WD road) to the top. Turn right at the fork and proceed 0.35 miles. Bear left and continue 1.2 miles. Turn left off the jeep trail and go 0.55 miles to a faint fork. Bear left onto F.S. Road #28 and go 0.75 miles to a junction. Bear right and continue northwest 1.3 miles to another fork. Stay right on F.S. #278. Travel 1.5 miles and stop just past a lone limber pine. In the sage flat on the right side of the road, the study is marked by short fenceposts. The 400-foot baseline stake is 54 feet north of the road. The 0-foot baseline stake is 400 feet further north, and is marked by browse tag #9028.



Map Name: Flagstaff Peak

Township 21S, Range 5E, Section 2



Diagrammatic Sketch

UTM 4318109.110 N, 472087.366 E

DISCUSSION

Trend Study No. 16C-31 (31-29)

The Box Canyon Knolls are located on the south side of the steep Muddy Creek canyon. This remote area is used by elk in winter. The study site is located in the open black sagebrush/grass type that covers most the flats. Elevation is 8,500 feet. The slope on the flat is very gentle with a southern aspect. The area is managed by the Forest Service, usually as an early unit in the summer rest-rotation system on the Emery cattle allotment. Abundant elk sign was encountered in 1994 and 1999. Pellet group data from 1999 estimate 5 deer, 108 elk and 9 cow days use/acre (12 ddu/ha, 267 edu/ha, and 22 cdu/ha). Most of the elk pellet groups are from winter use but some are more recent. All of the cow pats appear to be from last season.

Soil on the site is moderately shallow with an effective rooting depth of almost 14 inches. Texture is a clay loam with a neutral pH (6.8). There is very little rock in the profile or on the surface. The soil is very dense with a compacted horizon which varies in depth from 8 to 12 inches. The 1% slope precludes most soil movement and erosion is minimal, although bare spots are frequent. Some soil pedestaling is evident around shrubs and grasses. The surface of the clay loam soil shows expansion/contraction cracking which would indicate the presence of shrink/swell clays. Soil parent material appears to be limestone.

The dominant key browse species, black sagebrush, has a low-growing dense population. The majority of the plants have been lightly hedged, although some display moderate use. The age class structure indicates a stable population with excellent young recruitment, good vigor, and low decadence. Even with the large numbers of young plants, the population will likely not increase much in the future due to the high density of shrubs on the site. A small population of stunted mountain big sagebrush also occurs on the site. These shrubs show heavier use.

Low rabbitbrush is extremely abundant on the site. These shrubs are small, measuring only 4 x 8 inches and have an estimated population density of 22,420 plants/acre in 1994 and 19,220 by 1999. They are lightly hedged, in good vigor, and have low decadence. Other species on the site include small numbers of Utah serviceberry, fringed sagebrush, dwarf rabbitbrush, rubber rabbitbrush, broom snakeweed, and gray horsebrush.

Grasses are abundant on the site with pinewoods needlegrass, the dominant species, providing 72% of the grass cover in 1994 and 41% in 1999. Sheep fescue and mutton bluegrass are also common. All grasses combined provided 14% cover in 1994 and 11% in 1999. Forbs are diverse but provided only 2% cover in 1994 and 3% in 1999. Forbs tend to be low growing species. Narrowleaf paintbrush and lupine are the only large species, with common paintbrush, penstemon, and redroot eriogonum provide palatable spring forage.

1994 TREND ASSESSMENT

Trend for soil is up due mostly to a decrease in bare ground from 54% to 40%. Litter cover has increased slightly and provides well dispersed protective cover. The key browse on this site is black sagebrush. The mature plants in the population have increased while the number of decadent plants have decreased. There are many young plants in the population but few seedlings. Trend for browse is slightly up. Sum of nested frequency of grasses have increased since 1988, while those of forbs declined. Sum of nested frequency for grasses and forbs combined have remained similar indicating a stable herbaceous understory trend.

TREND ASSESSMENT

soil - up

browse - slightly up

herbaceous understory - stable

1999 TREND ASSESSMENT

Trend for soil is stable. Percent cover of litter has declined but cover of bare ground has remained stable. There is some soil pedestaling apparent around plants but erosion is minimal due to the level terrain. Trend for browse is stable. Density of the key species, black sagebrush, has increased slightly and there are abundant seedlings and young. Utilization is heavier but vigor is normal on most plants. Percent decadency has increased slightly but it is still low at 14%. The small stand of stunted mountain big sagebrush has increased slightly in density. It displays moderate to heavy use, good vigor and increased decadence since 1994. Rabbitbrush is still the most abundant numerous shrub on the site. This increaser, has declined steadily in density since 1988 from 32,599 plants/acre to 19,220 by 1999. The population is mostly mature with a moderate amount of young plants sampled. Trend for the herbaceous understory is down slightly. Sum of nested frequency of perennial grasses and forbs have declined slightly. Both slender wheatgrass and pinewoods needlegrass have declined significantly in nested frequency.

TREND ASSESSMENT

soil - stable

browse - stable

herbaceous understory - down slightly

HERBACEOUS TRENDS --

Herd unit 16C, Study no: 31

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'94	'99	'88	'94	'99	'94	'99
G	Agropyron trachycaulum	b121	b128	a72	52	47	31	1.15	.84
G	Festuca ovina	a26	a15	b110	12	6	45	.10	2.92
G	Poa fendleriana	a130	b157	b140	59	63	51	2.85	2.59
G	Sitanion hystrix	b27	a1	b19	13	1	9	.00	.13
G	Stipa pinetorum	b236	c281	a208	90	97	77	10.37	4.43
Total for Annual Grasses		0	0	0	0	0	0	0	0
Total for Perennial Grasses		540	582	549	226	214	213	14.49	10.93
Total for Grasses		540	582	549	226	214	213	14.49	10.93
F	Antennaria parvifolia	5	16	18	2	6	6	.65	.84
F	Androsace septentrionalis (a)	-	a-	b33	-	-	19	-	.15
F	Arabis spp.	b18	a-	a3	13	-	1	-	.00
F	Artemisia frigida	-	2	-	-	1	-	.00	-
F	Astragalus agrestis	a8	ab16	b19	3	7	10	.03	.17
F	Astragalus convallarius	-	3	2	-	2	1	.01	.00
F	Castilleja chromosa	b43	a-	a-	22	-	-	-	-
F	Castilleja linariaefolia	3	3	7	1	1	5	.00	.10
F	Calochortus nuttallii	b20	a-	b8	8	-	4	-	.02
F	Chaenactis douglasii	b21	a-	a1	13	-	1	-	.00
F	Crepis acuminata	11	5	4	5	3	2	.01	.06
F	Cryptantha spp.	-	2	-	-	1	-	.00	-

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'94	'99	'88	'94	'99	'94	'99
F	Eriogonum alatum	a-	ab3	b3	-	1	1	.00	.03
F	Erigeron eatonii	c197	b141	a67	77	59	34	.54	.59
F	Erigeron pumilus	a7	b22	a5	3	10	3	.21	.04
F	Eriogonum racemosum	72	64	70	31	30	32	.25	.92
F	Eriogonum umbellatum	24	33	16	11	16	8	.15	.09
F	Hymenoxys richardsonii	9	7	3	3	4	1	.02	.00
F	Lupinus argenteus	ab3	a-	b9	2	-	5	-	.08
F	Machaeranthera canescens	b9	a-	a-	4	-	-	-	-
F	Penstemon caespitosus	c31	b7	a-	14	3	-	.04	-
F	Penstemon carnosus	a-	a1	b10	-	1	5	.00	.05
F	Polygonum douglasii (a)	-	1	-	-	1	-	.00	-
F	Senecio multilobatus	a-	ab3	b8	-	1	4	.00	.04
F	Sphaeralcea coccinea	-	-	2	-	-	1	-	.00
F	Townsendia incana	1	-	-	1	-	-	-	-
F	Tragopogon dubius	ab2	a-	b6	2	-	3	-	.01
Total for Annual Forbs		0	1	33	0	1	19	0.00	0.15
Total for Perennial Forbs		484	328	261	215	146	127	1.96	3.09
Total for Forbs		484	329	294	215	147	146	1.97	3.24

Values with different subscript letters are significantly different at % = 0.10 (annuals excluded)

BROWSE TRENDS --

Herd unit 16C, Study no: 31

T y p e	Species	Strip Frequency		Average Cover %	
		'94	'99	'94	'99
B	Amelanchier utahensis	0	0	-	-
B	Artemisia frigida	3	4	.00	.01
B	Artemisia nova	97	94	5.50	9.05
B	Artemisia tridentata vaseyana	22	29	1.80	1.95
B	Ceratoides lanata	0	1	.03	.03
B	Chrysothamnus depressus	3	6	.18	.16
B	Chrysothamnus nauseosus	0	0	-	-
B	Chrysothamnus viscidiflorus	93	93	5.15	7.64
B	Gutierrezia sarothrae	8	8	.04	.09
B	Opuntia spp.	0	0	-	-
B	Tetradymia canescens	6	9	.18	.24
Total for Browse		232	244	12.90	19.17

BASIC COVER --

Herd unit 16C, Study no: 31

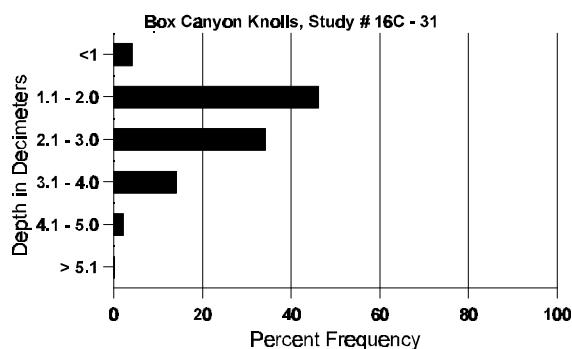
Cover Type	Nested Frequency		Average Cover %		
	'94	'99	'88	'94	'99
Vegetation	342	335	8.75	35.04	34.84
Rock	178	45	1.25	1.14	.76
Pavement	224	151	.25	.70	1.35
Litter	393	355	35.75	37.44	27.93
Cryptogams	49	71	.50	.23	.82
Bare Ground	370	326	53.50	40.24	39.54

SOIL ANALYSIS DATA --

Herd Unit 16C, Study # 31, Study Name: Box Canyon Knolls

Effective rooting depth (inches)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
13.8	55.6 (16.4)	6.8 4	42.0	25.4	32.6	2.9	13.2	137.6	0.4

Stoniness Index



PELLET GROUP DATA --

Herd unit 16C, Study no: 31

Type	Quadrat Frequency		Pellet Transect Days Use/Acre (ha)
	'94	'99	'99
Rabbit	16	7	n/a
Elk	62	55	108 (267)
Deer	11	5	5 (12)
Cattle	1	7	9 (22)

BROWSE CHARACTERISTICS --

Herd unit 16C, Study no: 31

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
<i>Amelanchier utahensis</i>																	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	16	20
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14	36
<u>% Plants Showing</u>																	
		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'88	00%			00%			00%									
	'94	00%			00%			00%									
	'99	00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)																	
											'88	0	Dec:	-			
											'94	0		-			
											'99	0		-			
<i>Artemesia frigida</i>																	
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	1	1	-	-	-	-	-	-	2	-	-	-	-	40		2
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	94	4	-	-	-	-	-	-	-	4	-	-	-	-	80	2	4
	99	1	2	-	-	-	-	-	-	3	-	-	-	-	60	6	3
<u>% Plants Showing</u>																	
		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'88	00%			00%			00%									
	'94	00%			00%			00%									
	'99	60%			00%			00%			+20%						
Total Plants/Acre (excluding Dead & Seedlings)																	
											'88	0	Dec:	-			
											'94	80		-			
											'99	100		-			

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Artemisia nova																	
S	88	25	-	-	-	-	-	67	-	-	92	-	-	-	6133		92
	94	-	-	-	1	-	-	-	-	-	1	-	-	-	20		1
	99	57	-	-	-	-	-	-	-	-	57	-	-	-	1140		57
Y	88	49	6	-	-	1	-	-	-	-	50	-	6	-	3733		56
	94	184	6	-	-	-	-	-	-	-	190	-	-	-	3800		190
	99	182	12	5	-	-	-	-	-	-	199	-	-	-	3980		199
M	88	30	14	2	-	-	-	-	-	-	42	-	4	-	3066	8 13	46
	94	229	57	-	1	-	-	-	-	-	287	-	-	-	5740	6 13	287
	99	183	139	24	-	-	-	-	-	-	346	-	-	-	6920	7 15	346
D	88	46	6	1	-	-	-	-	-	-	49	-	3	1	3533		53
	94	27	8	-	1	-	-	-	-	-	6	-	-	30	720		36
	99	64	25	-	-	-	-	-	-	-	78	-	-	11	1780		89
X	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	480		24
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	1220		61
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
	'88	17%				02%			09%							- 1%	
	'94	14%				00%			06%							+19%	
	'99	28%				05%			02%								
Total Plants/Acre (excluding Dead & Seedlings)												'88	10332	Dec:	34%		
												'94	10260		7%		
												'99	12680		14%		
Artemisia tridentata vaseyana																	
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	3	-	-	-	-	-	-	3	-	-	-	60		3
Y	88	1	2	-	-	-	-	-	-	-	3	-	-	-	200		3
	94	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4
	99	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	- -	0
	94	36	-	-	-	-	-	-	-	-	36	-	-	-	720	11 18	36
	99	16	11	9	-	-	-	-	-	-	36	-	-	-	720	15 24	36
D	88	2	-	-	-	-	-	-	-	-	2	-	-	-	133		2
	94	1	-	-	-	-	-	-	-	-	-	-	-	1	20		1
	99	2	7	3	1	-	-	-	-	-	11	-	1	1	260		13
X	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
	'88	40%				00%			00%							+59%	
	'94	00%				00%			02%							+23%	
	'99	34%				23%			04%								
Total Plants/Acre (excluding Dead & Seedlings)												'88	333	Dec:	40%		
												'94	820		2%		
												'99	1060		25%		

A G E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Ceratoides lanata																	
S	88	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
Y	88	3	-	-	-	-	-	-	-	-	3	-	-	-	200		3
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
M	88	15	-	-	-	-	-	-	-	-	15	-	-	-	1000	6 6	15
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5 7	0
	99	-	2	-	-	-	-	-	-	-	2	-	-	-	40	4 5	2
D	88	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'88	00%			00%			00%									
	'94	00%			00%			00%									
	'99	100%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)										'88	1266	Dec:		5%			
										'94	0			0%			
										'99	40			0%			
Chrysanthemum depressus																	
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	- -	0
	94	5	-	-	-	-	-	-	-	-	5	-	-	-	100	4 9	5
	99	7	-	-	-	-	-	-	-	-	7	-	-	-	140	3 9	7
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'88	00%			00%			00%									
	'94	00%			00%			00%									
	'99	00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)										'88	0	Dec:		-			
										'94	100			-			
										'99	160			-			
Chrysanthemum nauseosus																	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	- -	0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21 24	0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	18 24	0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'88	00%			00%			00%									
	'94	00%			00%			00%									
	'99	00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)										'88	0	Dec:		-			
										'94	0			-			
										'99	0			-			

A G E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Chrysothamnus viscidiflorus																	
S	88	16	-	-	-	-	-	2	-	-	18	-	-	-	1200		18
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4
Y	88	99	1	-	-	-	-	9	-	-	108	-	1	-	7266		109
	94	404	-	-	-	-	-	-	-	-	404	-	-	-	8080		404
	99	144	2	-	-	-	-	-	-	-	146	-	-	-	2920		146
M	88	280	22	-	-	-	-	10	-	-	303	-	9	-	20800	3 6	312
	94	705	12	-	-	-	-	-	-	-	717	-	-	-	14340	3 7	717
	99	753	23	-	-	-	-	-	-	-	776	-	-	-	15520	4 8	776
D	88	55	11	-	-	-	-	2	-	-	58	-	9	1	4533		68
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	39	-	-	-	-	-	-	-	-	35	-	1	3	780		39
X	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	140		7
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
			'88	07%		'94	00%		'99	04%						-31%	
			'88	01%		'94	00%		'99	00%						-14%	
			'88	03%		'94	00%		'99	.41%							
Total Plants/Acre (excluding Dead & Seedlings)												'88	32599	Dec:	14%		
												'94	22420		0%		
												'99	19220		4%		
Gutierrezia sarothrae																	
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	- -	0
	94	8	-	-	-	-	-	-	-	-	8	-	-	-	200	3 6	10
	99	21	-	-	-	-	-	-	-	-	21	-	-	-	420	4 8	21
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	2	-	-	-	-	-	-	-	-	1	-	-	1	40		2
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
			'88	00%		'94	00%		'99	00%						+52%	
			'88	00%		'94	00%		'99	00%							
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	0%		
												'94	220		0%		
												'99	460		9%		

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total									
		1	2	3	4	5	6	7	8	9	1	2	3	4												
Opuntia spp.																										
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1									
M	88	2	-	-	-	-	-	-	-	-	2	-	-	-	133	2	6									
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0									
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	15									
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>														
'88			00%			00%			00%																	
'94			00%			00%			00%																	
'99			00%			00%			00%																	
Total Plants/Acre (excluding Dead & Seedlings)												'88	133	Dec:	-											
												'94	0	-	-											
												'99	0	-	-											
Tetradymia canescens																										
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1									
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0									
	94	6	1	-	-	-	-	-	-	-	7	-	-	-	140	6	8									
	99	4	5	2	-	-	1	-	-	-	12	-	-	-	240	6	12									
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>														
'88			00%			00%			00%																	
'94			13%			00%			00%			+33%														
'99			42%			25%			00%																	
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-											
												'94	160	-	-											
												'99	240	-	-											